

Work Order ID 78393

\*78393\*

Page 1

January-09-12 8:54:06 AM

Item ID: D206-642-241

Accept

\*N9000040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Replacement Skidtube

Start Date: 09/01/2012 Start Qty: 1.00 \*1\*

Cust Item ID:

Required Date: 23/01/2012 Req'd Qty: 1.00 \*1\*

Customer:

Reference:

Approvals: Process Plan: M.L.J

Date: 12/01/09 Tooling:

Date:

Run Start \*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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D2650	Rev F
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100

0.00

\*100\*

DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPP D206-642-241 CHG005

N/A

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 78393****\*78393\***

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January-09-12 8:54:06 AM

Item ID: D206-642-241

Accept

**\*N900040100\***

Setup Start

**\*NS1\***

Revision ID:

Stop

**\*NS2\***

Item Name: Replacement Skidtube

Start Date: 09/01/2012 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 23/01/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

**\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop

**\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

110

0.00

**\*110\***

Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Debur Fwd edge of tube

2- Remove ridge on inside of Fwd edge of tube as per Dwg D2650

3-Weld Fwd Cap as per Dwg D2650. Use aluminum rod. Grind D2647 to fit as required.

Pick:

Qty Part Number Description Batch

A/R Aluminum Rod

M120164

JBE 12-04-17

4-Grind weld flush to cap on top surface only.

5-Cut Aft end as per dwg 2650 from front of tube and Debur

6-Remove inner indexing ridge on Aft end of skidtube as per Dwg D2650

7-Open holes for Aft end cap as per Dwg D2650 with #30 Drill Bit using DT8025.

8-Drill pilot holes using Dt 8167.

9-Locate DT8732 from inner Aft saddle hole &amp; 3rd crossbolt hole. Insert D3286-1 doubler using DT8732 &amp; D206-642-241-T1, then locating doubler off of 3/16" holes, cleco DT8732 &amp; doubler leaving DT8732 for added support.

10- Drill D3286-1 doubler rivet holes in tube using # 30 drill, spot drilling doubler at the same time.

CF 12-4-11

SAD 12-04-17

SAD 12-04-17

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

# Work Order ID 78393

**\*78393\***

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January-09-12 8:54:06 AM

Item ID: D206-642-241

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Item Name: Replacement Skidtube

Stop **\*NS2\***

Start Date: 09/01/2012 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 23/01/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals: Process Plan: Date: Tooling: Date:

Run Start **\*NR1\***

QC: Date: SPC (Y/N): Date:

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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11-Working from the center out, drill #30 holes into D3286-1 doubler. Cleco each hole as it is being drilled. Verify angle of holes to accommodate rivet heads.

12-Remove 3/16" cleco's only and open GHW holes to Ø0.500" as per Dwg D2650

13-Remove D3286-1 doublers, identify orientation, deburr, then attach them to the workorder

14-Remove indexing edge using DT8741 as per Dwg D2650

15-C'sink GHW rivet holes as per Dwg D2650

SAD  
12-04-17

120

QC6- Inspect dimensions to drawing

0.00

**\*120\***

QC

Memo

0.00

Quality Control

81264/18

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

# Work Order ID 78393

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January-09-12 8:54:06 AM

Item ID: D206-642-241 Accept **\*N9000040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Replacement Skidtube  
 Start Date: 09/01/2012 Start Qty: 1.00 **\*1\*** Cust Item ID:  
 Required Date: 23/01/2012 Req'd Qty: 1.00 **\*1\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130		0.00							
<b>*130*</b>	Skidtubes								
Skidtubes	Memo	0.00							
Skidtubes	1-Open crossbolt holes to Ø0.3125"								
	2-Drill pilot holes using DT8028-3, then open to Ø0.297" as per Dwg D2650.								
	Open Aft cap hole #6.								
	3-Deburr tube and blow out chips from inside the tube								
140	Chemical Conversion Coat per QSI005 4.1	0.00							
<b>*140*</b>									
HandFinish	Memo	0.00							
Hand Finishing									
150	QC3- Inspect Part Finish	0.00							
<b>*150*</b>	QC								
Quality Control	Memo	0.00							

CF 12-4-19

VG 12-4-19

~~SAO 12-4-19~~  
 SAO 12-04-19

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
12-04-19	150	Qc3 change to Qc7	SAD				

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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January-09-12 8:54:06 AM

Item ID: D206-642-241

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**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Replacement Skidtube

Start Date: 09/01/2012 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 23/01/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160		0.00							
<b>*160*</b>	Skidtubes								
Skidtubes	<b>Memo</b>	0.00							
Skidtubes	1-Open holes to finished size as per Dwg D2650, D2650-3 Drilling Detail (without cutting fluid)								
	2-C'sink crossbolt spacer holes as per Dwg D2650(without cutting fluid)								
	3-Deburr and blow out all chips from inside the tube								
170	QC6- Inspect dimensions to drawing	0.00							
<b>*170*</b>									
QC	<b>Memo</b>	0.00							
Quality Control									

OK 12/04/19

~~1~~ 1 0 BL 12/04/19

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Item ID: D206-642-241

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**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Replacement Skidtube

Start Date: 09/01/2012 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 23/01/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

180

0.00

**\*180\***

Skidtubes

0.00

Skidtubes

Memo

1-Locate, install and rivet doublers as per Dwg D2650. Micro-shave rivets as required

- De 12/04/19

2-Bond D2654-3 web in place as per QSI 015. Ensure holes line up. Allow 12 Hrs. cure time before cutting

Start Date: 12/04/19 Time: 11:30

Finish Date: 12/04/19 Time: 2:00

Pick:

Qty Part Number Description Batch

A/RSikaflex-291 121221

Sikaflex expire date: 13/01/04

De 12/04/19

190

QC5- Inspct part completeness to step on W/O

0.00

**\*190\***

QC

Memo

0.00

Quality Control

1 0 BE 12/04/23

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Item ID: D206-642-241

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Replacement Skidtube

Start Date: 09/01/2012 Start Qty: 1.00

\*1\*

Cust Item ID:

Required Date: 23/01/2012 Req'd Qty: 1.00

\*1\*

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start \*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop \*NR2\*

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

200

0.00

\*200\*

Skidtubes

0.00

Skidtubes

Memo

1-remove alodine from around hole and prepare for welding

2-Prep per QSI 005 and Insert D2649 crossbolt spacers. Weld as per QSI 004 and Dwg D2650. Remember to back drill each hole to 0.25" before welding the other side. Use aluminum rod.

Pick:

QtyPart NumberDescriptionBatch

A/RAluminum Rod m120164

3-Grind welds flush as per Dwg D2650.

4-Using DT8733, insert (2) D3286-3 spacers as per QSI 004 and Dwg D2650.

Remember to back drill each hole to Ø0.402" before welding other side. Use SS rod as required.

A/RSS Rod NONE

5-Counterbore 5/16" x 0.750" deep except 7th hole from Aft end as per Dwg D2650. Deburr

3 BE 12/04/23

1CC 12-4-24 / 12/04/24

BE 12/04/25

1CC 12-4-25

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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# Work Order ID 78393

**\*78393\***

Page 8

January-09-12 8:54:06 AM

Item ID: D206-642-241 Accept **\*N9000040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Replacement Skidtube  
 Start Date: 09/01/2012 Start Qty: 1.00 **\*1\*** Cust Item ID:  
 Required Date: 23/01/2012 Req'd Qty: 1.00 **\*1\*** Customer:

## Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210		0.00							
<b>*210*</b>	HandFinishing								
HandFinish	Memo	0.00							
Hand Finishing	Install D2680-041 Nut Plate as per Dwg D2650								
220	QC10- Inspect visual per QSI004- ground welds	0.00							
<b>*220*</b>									
QC	Memo	0.00							
Quality Control									
230	QC5- Inspect part completeness to step on W/O	0.00							
<b>*230*</b>									
QC	Memo	0.00							
Quality Control									

*M/CC 12-4-25*

*Snksto1*

*QC9 → lpl 12-05-001*

*Snksto1*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries



# Work Order ID 78393

**\*78393\***

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January-09-12 8:54:06 AM

Item ID: D206-642-241

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Replacement Skidtube

Start Date: 09/01/2012 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 23/01/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

240

Pressure Wash per QSI005 4.3

0.00

**\*240\***

HandFinish

Memo

0.00

Hand Finishing

Brush alodine tube on crossbolt spacer area, do not acid etch, do not dip tube in tank.

*Handwritten: 12-5-2*

250

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

**\*250\***

Powdercoat

Memo

0.00

Powder Coating

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

*Handwritten: 12:45, 320°F, 1:15*

*Handwritten: m121134*

*Handwritten: m/f, 12/05/02*

260

QC3- Inspect Part Finish

0.00

**\*260\***

QC

Memo

0.00

Quality Control

*Handwritten: 12/05/02*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**\*78393\***

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**\*N900040100\***

Setup Start **\*NS1\***

Stop \*NS2\*

**Cust Item ID:**

**Customer:**

**Reference:**

Run Start \*NR1\*

Stop \*NR2\*

**QC:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **SPC (Y/N):** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Insp.  
Stamp**

0.00

\*270\*

## HandFinishing

0.00

HandFinish

## Memo

## Hand Finishing

1- Install inserts & wearpads as per dwg D2922. Use a drop of Sikaflex inside insert holes before installing wearpad/wearplate.

A/RSikaflex-291 12/22/

Sikaflex expire date: 13/01

2-Install D2651-3 O-Rings on D2651-1 plugs with Petroleum Jelly and install plugs as per Dwg D2650 (D2650-3 detail). Clean excess adhesive.

3-Install MS27039-4-06 Screw as per DEO 9153.

4 -Install D2646 Aft Cap and seal with Sikaflex. Clean excess adhesive

A/RSikaflex-291 1 2/221

Sikaflex expire date: 13/01.

5 -Wing Walk as per Dwg D2650-3 and QSI 005 4.4

A/R Batch: 121121

Batch: \_\_\_\_\_

QC5- Inspect part completeness to step on W/O	0.00
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**\*300\***

QC

## Memo

0.00

## Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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**\*78393\***

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Item ID: D206-642-241

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Replacement Skidtube

Start Date: 09/01/2012 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 23/01/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
310		0.00							
<b>*310*</b>	Packaging								
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D206-664-241								
	Location: <u>PPP 83023</u>								
	PPP Rev: _____								
320	QC21- Final Inspection - Work Order Release	0.00							
<b>*320*</b>									
QC	Memo	0.00							
Quality Control									

*12/01/23*

*12/5/30*

*MF 12-05-28*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

# Picklist Print

January-09-12 8:54:10 AM

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Work Order ID: 78393

\*78393\*

Parent Item: D206-642-241

\*D206-642-241\*

Parent Item Name: Replacement Skidtube

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev: 04.12.02 Revised procedural steps KJ/JLM IPP RevP: revise and update route/bom DD 10.01.06 verified by: ECIPP rev Q 10.02.19 per PAR 09-043 EC verified by: DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D2620		Manufactured	No			110	Each	28.0000	1	1			
*D2620*									**	①		CF 12-4-11	
Skidtube, 206 Skidtube													

Location	Loc Qty	Loc Code
B82028		
LG	28	
71616	1	
71617	6	
75587	2	
76815	6	
76817	10	
76819	3	

D3286-1		Manufactured	No			110	Each	146.0000	2	2			
*D3286-1*									**	SAD		K-04-17	
Doubler													

Location	Loc Qty	Loc Code
B79556		
LG002	146	
74872	6	
75484	22	

D2647		Manufactured	No			110	Each	164.0000	1	1			
*D2647*									**	②		BE 12-04-17	
Cap													

Location	Loc Qty	Loc Code
B79563 *1		
LG002	164	
73826	55	
75482	109	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

January-09-12 8:54:10 AM

Work Order ID: 78393

**\*78393\***

Parent Item: D206-642-241

**\*D206-642-241\***

Parent Item Name: Replacement Skidtube

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

D2654-3

Manufactured No

180

Each

3.0000

1

1

**\*D2654-3\***

Web

\*\*

DC 12/04/19

Location

B82106

Loc Qty

Loc Code

LG

3

①

73442

3

CR3212-4-04

Purchased

No

180

Each

11,769.00

52

52

**\*CR3212-4-04\***

Cherry Rivet

\*\*

DC 12/04/19

Location

Loc Qty

Loc Code

ST331

1779

116471

78

117816

3

118686

1

118840

16

119017

1671

119075

10

st510

9990

119075

9990

⑤2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

January-09-12 8:54:10 AM

Work Order ID: 78393

**\*78393\***

Parent Item: D206-642-241

**\*D206-642-241\***

Parent Item Name: Replacement Skidtube

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

D2649

Manufactured No

200

Each

294.0000

18

18

**\*D2649\***

Cross Bolt Spacer

**\*\***

*8E12/01/23*  
*879564 \*18*

Location

Loc Qty

Loc Code

LG001

294

65317

1

68224

2

68507

11

71355

2

72704

2

72841

11

73390

8

73857

21

73858

53

73859

4

73860

4

76793

175

D3286-3

Manufactured No

200

Each

180.0000

2

2

**\*D3286-3\***

Spacer

**\*\***

*8E12/01/25*  
*879557 \*2*

Location

Loc Qty

Loc Code

LG

100

78015

100

LG001

80

74117

1

76773

79

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Page 4

January-09-12 8:54:10 AM

Work Order ID: 78393

\*78393\*

Parent Item: D206-642-241

\*D206-642-241\*

Parent Item Name: Replacement Skidtube

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

D2680-041

Manufactured No

210

Each

140.0000

1

1

\*D2680-041\*

Nut Plate

\*\*

OK /CC 12-4-25

## Location

## Loc Qty

## Loc Code

ST013

44

ST019

96

96

210

Each

1,716.000

2

2

\*\*

OK /CC 12-4-25

CR3212-4-03

Purchased

No

\*CR3212-4-03\*

Cherry Rivet

## Location

## Loc Qty

## Loc Code

FP002

724

114859

724

ST331

992

110139

2

119017

990

210

Each

947.0000

2

2

\*\*

OK /CC 12-4-25

CCR264SS3-3

Purchased

No

\*CCR264SS3-3\*

Cherry Rivet

## Location

## Loc Qty

## Loc Code

ST331

947

113973

2

117849

139

119017

806

OK /CC 12-4-25

January-09-12 8:54:10 AM

Shop Packet Print

Page 4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

January-09-12 8:54:10 AM

Page 5

Work Order ID: 78393

**\*78393\***

Parent Item: D206-642-241

**\*D206-642-241\***

Parent Item Name: Replacement Skidtube

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

D2646 Manufactured No

270 Each

130.0000

1 1

**\*D2646\***

Aft Cap

\*\*

1 2P 12/05/02

Location

Loc Qty

Loc Code

FP002

79562✓

130

62678

5

68280

5

70945

1

71038

4

71070

2

73294

1

73825

112

D2651-1 Manufactured No

270 Each

225.0000

18 18

**\*D2651-1\***

Plug

\*\*

18 2P 12/05/02

Location

Loc Qty

Loc Code

FP001

82573✓

225

57869

1

66445

10

69018

2

70839

2

71037

31

73827

179

AN960JD416 ~~NAS1149D0463J~~ Purchased No

270 Each

0.0000

1 1

**\*AN960.ID416\***

Washer

\*\*

1 2P 12/05/02

121255✓

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

Page 6

January-09-12 8:54:10 AM

Work Order ID: 78393

**\*78393\***

Parent Item: D206-642-241

**\*D206-642-241\***

Parent Item Name: Replacement Skidtube

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

D2651-3 Manufactured No

270 Each 715.0000 18 18

**\*D2651-3\***

O-Ring

\*\*

18 (20) 12/05/02

Location

Loc Qty

Loc Code

FP001

715

61962

12

73828

703

MS27039-1-08 Purchased No

270 Each 1,053.000 46 46

**\*MS27039-1-08\***

Screw

\*\*

46 (20) 12/05/02

Location

Loc Qty

Loc Code

ST291

1053

117423

77

118910

102

119075

374

119109

500

ALS4-1032-130 Purchased No

270 Each 1,684.000 44 44

**\*AI S4-1032-130\***

Insert

\*\*

44 (20) 12/05/02

Location

Loc Qty

Loc Code

ST280

1589

119084

1589

ST281

95

119632

95

MS27039-4-06 Purchased No

270 Each 304.0000 1 1

**\*MS27039-4-06\***

Screw

\*\*

1 (20) 12/05/02

Location

Loc Qty

Loc Code

ST292

304

119075

304

January-09-12 8:54:10 AM

Shop Packet Print

Page 6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Page 7

January-09-12 8:54:10 AM

Work Order ID: 78393

**\*78393\***

Parent Item: D206-642-241

**\*D206-642-241\***

Parent Item Name: Replacement Skidtube

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

AN960JD10L ~~¥~~ NAS1149D03321 Purchased No

120644 ✓ 270 Each

0.0000 46 46

**\*AN960JD10L \***

\*\* 46 (SP) 12/08/02

Washer

D3537-1 Manufactured No

270 Each

24.0000 4 4

**\*D3537-1 \***

\*\* 41 (SP) 12/08/02

Wearpad

Location	Loc Qty	Loc Code
FP002 81959 ✓	24	
69817	5	
77036	19	

D3537-3 Manufactured No

270 Each

12.0000 1 1

**\*D3537-3 \***

\*\* 1 (SP) 12/05/02

Wearpad

Location	Loc Qty	Loc Code
FP002 78836 ✓	12	
76986	12	

D3535-13 Manufactured No

270 Each

4.0000 1 1

**\*D3535-13 \***

\*\* 1 (SP) 12/05/02

Wearshoe

Location	Loc Qty	Loc Code
FP001 80327 ✓	4	
74616	4	

D3536-13 Manufactured No

270 Each

3.0000 1 1

**\*D3536-13 \***

\*\* 1 (SP) 12/05/02

Gasket

Location	Loc Qty	Loc Code
FP002 78964 ✓	3	
72880	3	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Page 8

January-09-12 8:54:10 AM

Work Order ID: 78393

**\*78393\***

Parent Item: D206-642-241

**\*D206-642-241\***

Parent Item Name: Replacement Skidtube

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

D3535-21

Manufactured No

270 Each

7.0000 1 1

**\*D3535-21\***

Wearshoe

\*\*

1 (DP) 12/05/02

Location

Loc Qty

Loc Code

FP001

78987 ✓

7

70380

7

D3536-21

Manufactured No

270 Each

5.0000 1 1

**\*D3536-21\***

Gasket

\*\*

1 (DP) 12/05/02

Location

Loc Qty

Loc Code

FP002

83433 ✓

5

70464

5

D3535-33

Manufactured No

270 Each

11.0000 1 1

**\*D3535-33\***

Wearshoe

\*\*

1 (DP) 12/05/02

Location

Loc Qty

Loc Code

FP001

11

70383

1

70462 ✓

10

D3536-33

Manufactured No

270 Each

19.0000 1 1

**\*D3536-33\***

Gasket

\*\*

1 (DP) 12/05/02

Location

Loc Qty

Loc Code

FP002

19

70382

3

70465 ✓

16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

QTY -1	QTY -3	QTY -5	QTY -7	PART NUMBER	DESCRIPTION
X				D2650-1	SKIDTUBE ASSEMBLY
	X			D2650-3	SKIDTUBE ASSEMBLY
		X		D2650-5	SKIDTUBE ASSEMBLY
			X	D2650-7	SKIDTUBE ASSEMBLY
1	1	1	1	D2600-1-160	EXTRUSION
1				D2654-1	WEB
	1			D2654-3	WEB
		1		D2654-5	WEB
			1	D2654-7	WEB
1	1	1	1	D2646	AFT CAP
1	1	1	1	D2647	CAP
17	18	19	23	D2649	CROSS BOLT SPACER
16	18	14	22	D2651-1	PLUG
16	18	14	22	D2651-3	O-RING
1	1	1	1	D2680-041	NUT PLATE
2	2			D3286-1	DOUBLER
2	2			D3286-3	STUD
42	44	54	60	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, ALS7-1032-130)
2	2	2	2	AN960JD10L	WASHER
2	2	2	2	CCR264SS3-3	RIVET
2	2	2	2	CR3212-4-03	RIVET
2	2	2	2	MS27039-1-08	SCREW
1	1	1	1	MS27039-4-06	SCREW
1	1	1	1	AN960JD416	WASHER
52	52			CR3212-4-04	RIVET

F

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: -CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
-POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3  
-BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: N/A
- 8) WELD PER DART QSI 004
- 9) DAMAGE TOLERANCE ON FWD BEND:  
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- 10) BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015
- 11) INSERT D2651-1 PLUG C/W D2651-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE)
- 12) DRILL Ø0.297 FOR ALS7-1032-130 INSERTS USING TEMPLATE DT8056-1 ON -1 TUBE, DT8056-3 ON -3 TUBE, DT8056-5 ON -5 TUBE, AND DT8056-7 ON -7 TUBE. INSTALL INSERTS AFTER FINISH.
- 13) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

F	DRAWING UPDATED TO CURRENT STANDARDS. SHT 6 ADDED. ALL SECTION AND DETAIL VIEWS TRANSFERRED TO SHT 6. SHT 1 IN PL PART D2649 QTY UPDATED. SHT 6 SECT C-C GRIND INSTRUCTIONS DELETED FROM NOTE 7 (SEE NCR 239).	AJS	08.08.08
E	REMOVE CBORE, CHG DRILL, ADD CHAMFER	CP	06.03.30
D	REDRAW: INCORP. DE09136/9153/9163 MOD GROUND HANDLING ON D2650-1/-3	CP	04.05.17
C	CHANGE HOLE PATTERN AND FRONT END	DS	97.10.29
B	AS MANUFACTURED CHANGES	DS	97.06.26
A	NEW ISSUE	DS	97.03.25
REV.	DESCRIPTION	BY	DATE
DESIGN	DS	<b>DART AEROSPACE USA, INC</b>	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2650	SHEET 1 OF 6
APPROVED		TITLE	SCALE
DE APPR.		206/407 SKIDTUBE ASSEMBLIES	NTS
DATE	08.08.08	COPYRIGHT © 1997 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



The figure consists of two technical drawings of a component labeled D2650-1.

**D2650-1 BENDING/DRILLING DETAIL:** This drawing shows the side profile of the component. It starts with a 5.0 unit thick section on the left, followed by a 17.1 REF (reference) section. The main body has a total length of 96.5 units. Key features include:

- A 63.85 unit long section with a 53.850 unit long sub-section.
- A 30.90 unit long section containing 5 HOLES @ 7.725 PITCH.
- A 15.22 unit long section with a 6.500 unit long sub-section.
- A 7.00 FLAT section.
- A 19.00<sup>+0.03</sup><sub>-0.00</sub> unit long section.
- A 2.00 TO WEB section on the right.
- DETAIL A (C8-6) is indicated at the top left and top right.
- DETAIL B (C8-6) is indicated at the bottom right.
- Other dimensions include 5.00, 10.00, 3.975, 5.225, 17.1, 79.4 TO BEND TANGENT, and 96.5.
- Material callouts include R30±1, D2654-1 WEB, and Ø0.375 17 PL PER SIDE.
- A note states: "NO CBORE THIS HOLE, ON EITHER SIDE".

**D2650-1 ASSEMBLY/FINISHING DETAIL:** This drawing shows the top view of the component. It features:

- DETAIL F (A3-6) at the left end.
- DETAIL E (A7-6) at the right end.
- A central section with 5 holes, each 1.5 units apart, labeled "FINISH HOLES PER DETAIL D C2-6".
- A section labeled "ANTI-SKID PAINT 3 PL" (3 layers).
- Dimensions include 9.5, 1.5, and 10.0.
- Material callouts include P (likely plate) and A3-6.

**RELEASED** stamp is visible on the right side of the drawing.

### **D2650-1 ASSEMBLY/FINISHING DETAIL**

DESIGN	DS	<b>DART AEROSPACE USA, INC</b>	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.	<i>[Signature]</i>	D2650	SHEET 2 OF 6
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	206/407 SKIDTUBE ASSEMBLES	NTS
DATE	08.08.08	COPYRIGHT © 1997 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

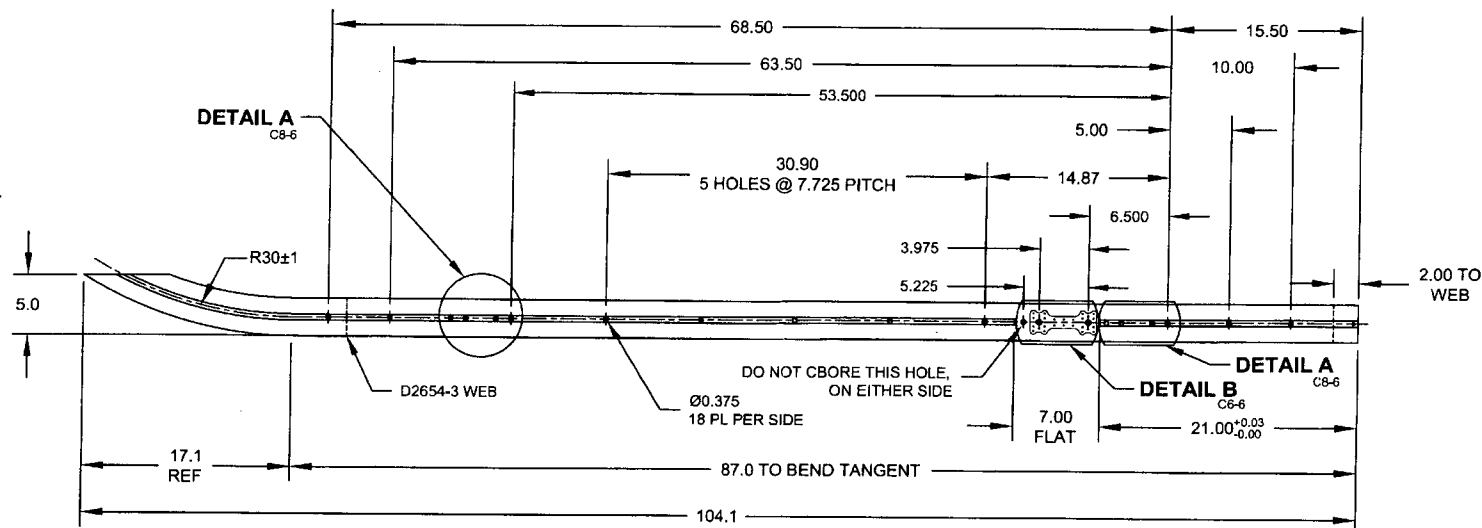
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

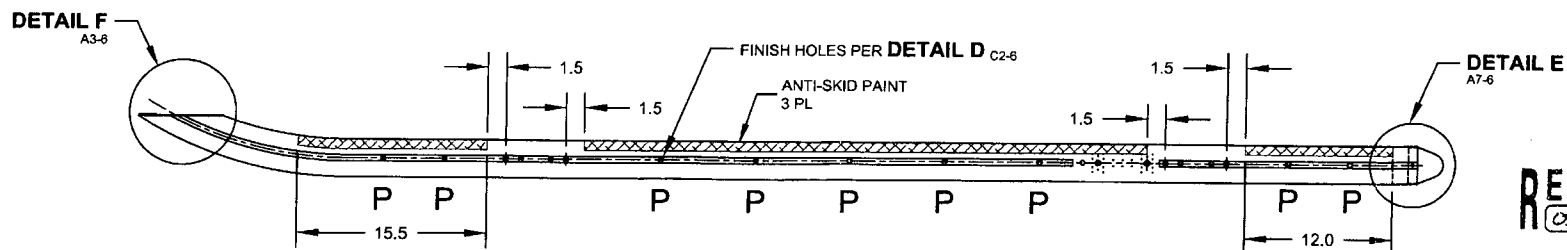
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

78393






**D2650-3 BENDING/DRILLING DETAIL**



**D2650-3 ASSEMBLY/FINISHING DETAIL**

**RELEASED**  
05 07 22 111

DESIGN	DS	<b>DART AEROSPACE USA, INC</b>	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2650	SHEET 3 OF 6
APPROVED		TITLE	SCALE
DE APPR.		206/407 SKIDTUBE ASSEMBLIES	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

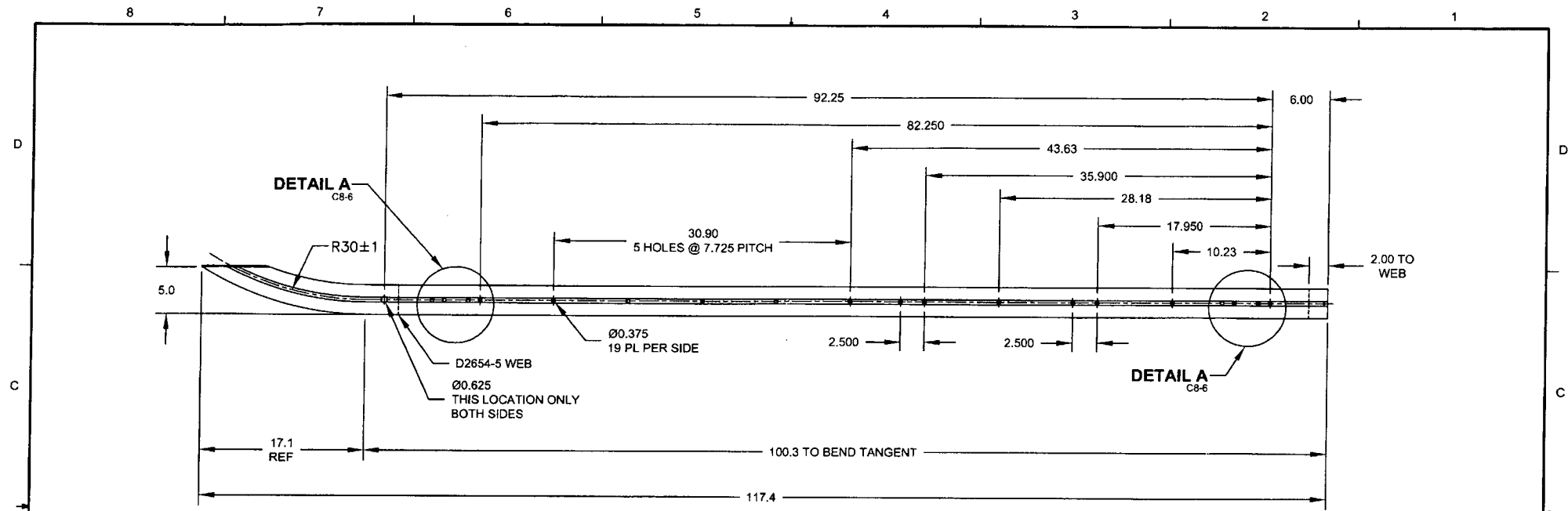
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

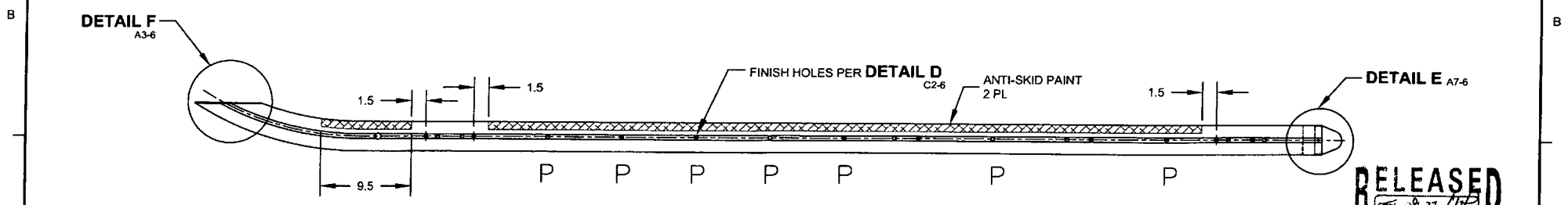
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

78393



**D2650-5 BENDING/DRILLING DETAIL**



**D2650-5 ASSEMBLY/FINISHING DETAIL**

**RELEASED**  
08-09-2017

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

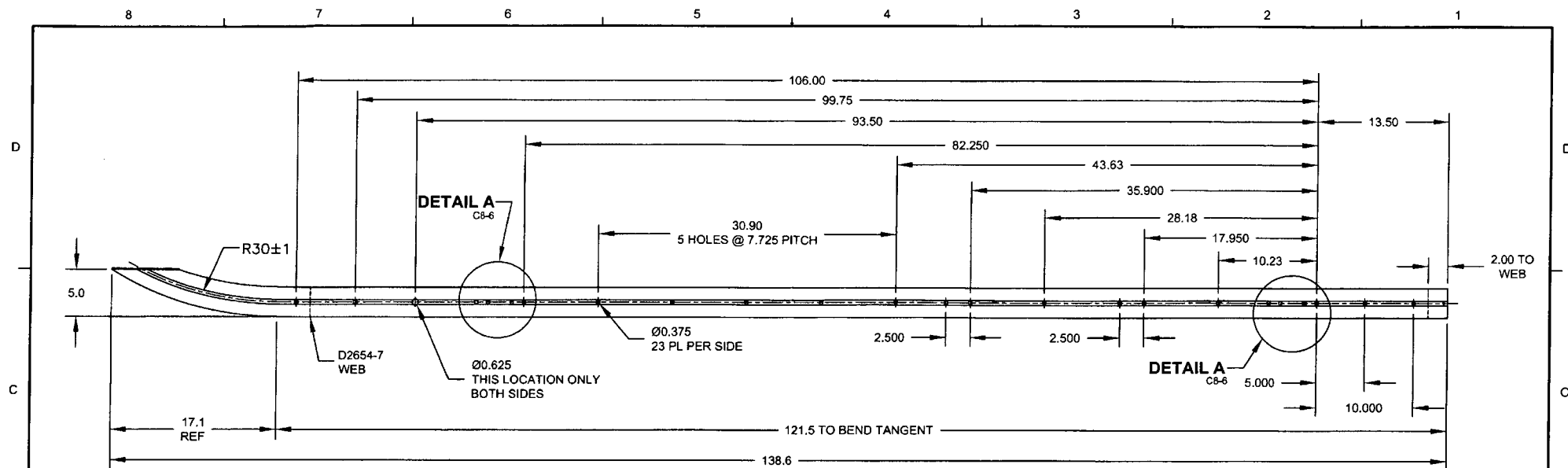
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Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

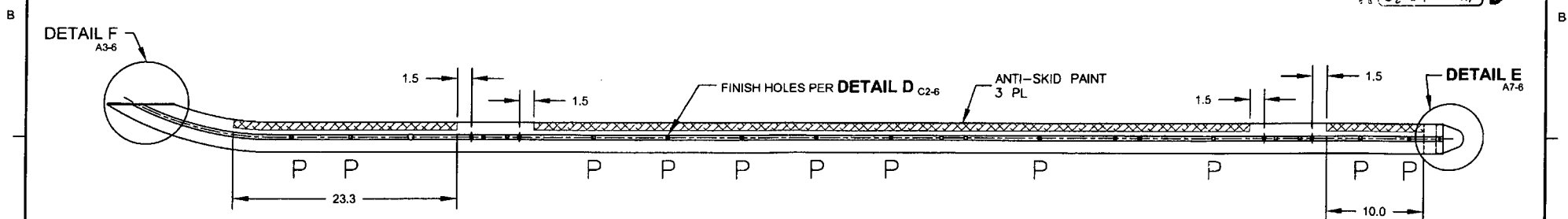
**NOTE:** Date & initial all entries

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**D2650-7 BENDING/DRILL DETAIL**

RELEASED  
08 07-22 / 111



**D2650-7 ASSEMBLY/FINISHING DETAIL**

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MFG. APPR.		D2650	SHEET 5 OF 6
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

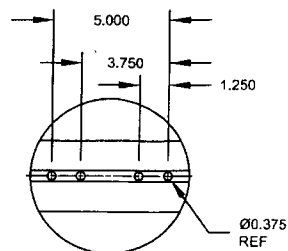
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

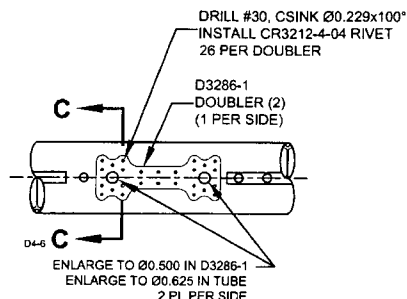
**NOTE:** Date & initial all entries



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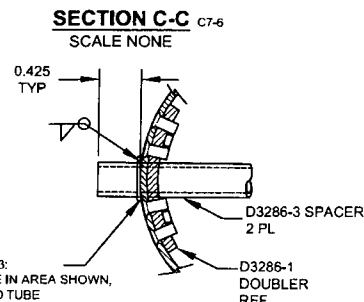


**DETAIL A**  
SCALE 2X

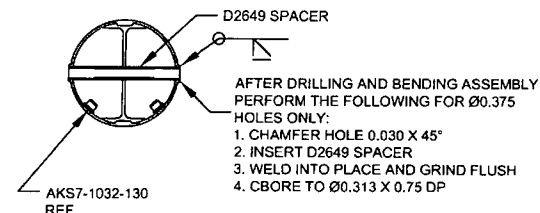


**DETAIL B**  
SCALE 2X

- TO INSTALL D3286-1/3:
1. GRIND OFF FLANGE IN AREA SHOWN, FLUSH WITH ROUND TUBE
  2. LOCATE & DRILL D3286-1 DOUBLER USING DT3286-1T1
  3. ENLARGE HOLES IN D3286-1 TO 0.500
  4. ENLARGE HOLES IN TUBE TO 0.625 AND CHAMFER HOLE 0.030x45°
  5. RIVET D3286-1 TO TUBE
  6. INSERT D3286-3 SPACER
  7. WELD IN PLACE.



**SECTION C-C** C7-6  
SCALE NONE

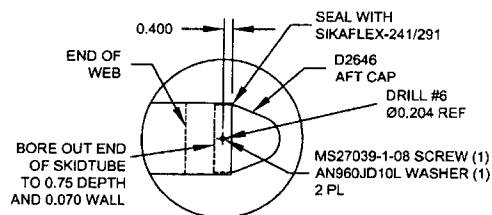


**DETAIL D**  
FOR 0.375 HOLES ONLY  
SCALE 3X

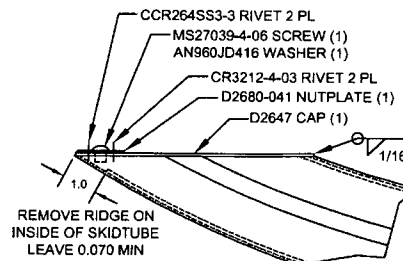
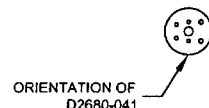
**DETAIL F NOTES:**

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D2647 (TRIM AS NECESSARY)
4. WELD D2647 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D2680-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D2680-041 PRIOR TO FINISH



**DETAIL E**  
SCALE 2X



**DETAIL F**  
SCALE NONE

**RELEASED**  
08-09-22-19

DESIGN	DS	<b>DART AEROSPACE USA, INC</b>	
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CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2650	SHEET 6 OF 6
APPROVED		TITLE	SCALE
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

NO. 291

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay Elliott  
Job number: 83400  
Part number: A206-642-541  
Description: Skid tube  
Welding Process: Tig ☒ Mig ☐  
Base material: Alum.  
Current: AC ☒ DC ☐

TEST REQUIREMENTS AND RESULTS

Visual:

pass ☒ fail ☐

Penetration:

pass ☒ fail ☐

UNACCEPTABLE

Cracks:

pass ☒ fail ☐

Undercut:

pass ☒ fail ☐

Pin holes:

pass ☒ fail ☐

Overlap (cold lap)

pass ☒ fail ☐

Porosity (surface):

pass ☒ fail ☐

Coloration:

pass ☒ fail ☐

Qualifier [Signature]

Date of Test Coupon 12.04.26

Welder Barclay Elliott

Date of Test Coupon 12.04.26

The above named individual is qualified in accordance with AWS D17.1.2001 to weld